Session 613

Advanced EOF

Eric Noyau

Introduction

- How do I build a WebObjects application?
- Where do I start?
- Where do I put my code?

Build an Application

Where do I start?

- Start with the data you are going to manipulate
- Build your data model or make sure you understand it well

Data Model

- Review the performance implications of your design
  - Try to move BLOBS in their own tables
  - Be careful with inheritance
- Triggers and stored procedures in your database are making your job harder
- Think about how your primary keys are generated

Data Model

Primary key generation

- If you can, let the EOAdaptor handle it
- Make the primary key a 24 Byte binary
- Use the delegate:

```
databaseContextNewPrimaryKey(dbContext,
object, entity)
```

- Mark the primary key attributes class property and fill them yourself in awakeFromInsertion()

Build an Application

Where do I start?

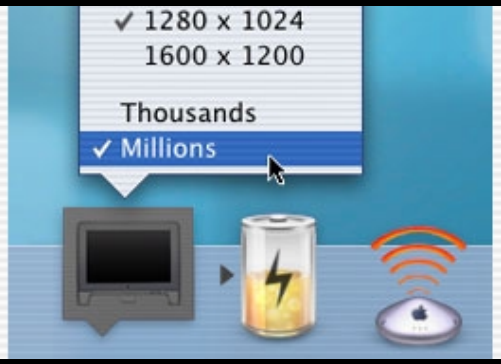
- Build your data model or make sure you understand it well
- Build your EOModel file and validate it

EOModel Tips

- Spend time on your EOModel file
- Click on all the inspectors, make sure you understand all the checkboxes
- Compare your relationships with the ones in the example EOModels
- Build a Direct to Java Client application

Demo

BugTracker Model



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Build an Application

- Build your data model or make sure you understand it well
- Build your EOModel file and validate it
- Partition your logic

Logic Partitioning

Where do I put my code?

- EO Logic

EO Logic

Subclassing choice

- EOGenericRecord
  - No code
  - No logic, just the data
- Custom Enterprise Object
  - More powerful, full-fledged objects
  - Maintenance when the model changes

EO Logic

Accessors

```
public class Bug extends EOGenericRecord {
   public String title() {
      return (String)storedValueForKey("title");
   }
   public void setTitle(String title) {
      takeStoredValueForKey(name, "title");
   }
   ...
}
```

You can put code in accessors, but…

EO Logic

KeyValueCoding

	Get	Set
Key Value Coding	String name() String name String _name() String _name	void setName(String name) String name void _setName(String name) String _name
Stored Key Value Coding	String _name() String _name String name() String name	void _setName(String name) String _name void setName(String name) String name

public static boolean canAccessFieldsDirectly()
public static boolean shouldUseStoredAccessors()

EO Logic

Validation

```
public String validateName(String name)
    throws NSValidation.ValidationException {
  if (name == null || name.length() < 5)
    throw new NSValidation.ValidationException(
    "The name of a component should contain
  more than 4"
    "characters", this, "name");
  return name;
}
```

EO Logic

Validation

```
public void validateForDelete()
    throws NSValidation.ValidationException {
  super.validateForDelete();

  if (childs().count() != 0) {
      throw new NSValidation.ValidationException(
        “Cannot suppress the component named ’”
      + name()
      + “', you have to remove its
  subcomponents.");
}
```

EO Logic

Validation

public <Type> validate<Xxx>(<TYPE> value)

Take a value, return a value, throws an error

public void validateForDelete()
public void validateForInsert()
public void validateForSave()

Call super!

EO Logic

Other Methods

- Methods you can implement

  public void unableToSetNullForKey()
  public void awakeFromInsertion()
  public void awakeFromFetch()

- Methods you should not override

  public void willChange()
  public void willRead()

EO Logic

Keep your EOS clean

- Do not put EOAccess specific code in your EO
- Do not put WOFramework code in your EO

Logic Partitioning

Where do I put my code?

- EO Logic
  - Accessors
  - Validation
  - Business rules
- Assume everything is in the same Editing Context

Interface Logic

```
public class Foo extends WOComponent {
public Bug currentBug;
/** @TypeInfo bugtracker.eo.Bug */
public NSArray bugs() {
    return <fetch the bugs>;
}
```

Logic Partitioning

Where do I put my code?

- EO Logic
- Interface Logic
  - Everything to connect in WOBuilder
  - Translations (boolean/Strings)
  - Session storage (current user…)

Logic Partitioning

Where do I put my code?

- EO Logic
- Interface Logic

Where do I put the rest?

Logic Partitioning

Where do I put my code?

- EO Logic
- Interface Logic
- Application Logic
  - How to Fetch/Save
  - Caching
  - Multiple EditingContext (back button!)
  - Prefetching

Application Logic

Advantages

- Not dependent on WOFramework
- Reusable on the client eventually
- Simplified Testing

Demo

Logic Partitioning example

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WebObjects Lab

- Located downstairs in Room K
- Lab hours
  - Monday 12:00pm–6:00pm
  - Tuesday 10:30am–6:00pm
  - Wednesday 10:30am–6:00pm
  - Thursday 10:30am–6:00pm
  - Friday 10:30am–3:30pm

☑ Vote for WebObjects as Best App Server

http://developer.apple.com/webobjects

Roadmap

614 Advanced Java Client	Room A1 **Thurs., 5:00pm**
616 Getting the Most Out of WebObjects Tools	Room A1 **Fri., 9:00am**
617 WebObjects Security	Room A1 **Fri., 10:30am**
FF111 Feedback Forum: WebObjects	Room A1 **Fri., 3:30pm**

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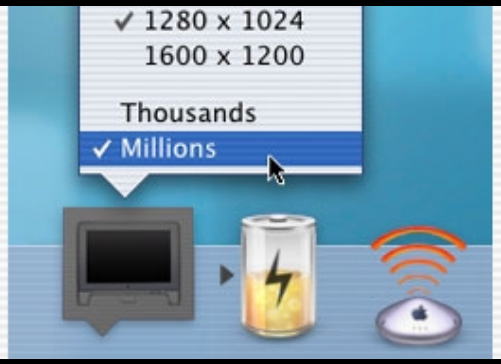
Q&A



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